

**REMARKS**

This Amendment and Response to Non-Final Office Action is being submitted in response to the non-final Office Action mailed July 20, 2006. Claims 1-4, 6, 8-16, and 20-55 are pending the Application.

Claims 1, 2, 6, and 10-12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Factor (U.S. Patent No. 6,272,523) in view of Marques et al. (U.S. Patent No. 6,643,706) in view of Henry et al. (U.S. Patent No. 6,681,392).

Claims 13, 14, 21, 22, 27-29, 31-40, 42, and 50-55 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Factor in view of Marques et al. in view of Modi et al. (U.S. Patent No. 6,667,980).

Claims 23-26 and 30 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Factor in view of Bruck et al. (U.S. Patent No. 6,088,330).

Claims 3, 4, 8, and 9 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Factor in view of Allen et al. (U.S. Patent No. 5,704,041).

Claims 15, 16, 20, 41, and 43-47 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Factor in view of Marques in view of Modi in view of Allen et al.

Claims 48 and 49 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Factor in view of Marques in view of Davis et al. (U.S. Patent No. 6,477,566).

In response to these rejections, the Claims have been amended herein, without prejudice or disclaimer to continued examination on the merits. These amendments are fully supported in the Specification, Drawings, and Claims of the Application and no new matter has been added. Based upon the amendments, reconsideration of the Application is respectfully requested in view of the following remarks.

**Rejection of Claims 1, 2, 6, and 10-12 Under 35 U.S.C. 103(a) –****Factor, Marques et al, and Henry et al.:**

Claims 1, 2, 6, and 10-12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Factor (U.S. Patent No. 6,272,523) in view of Marques et al. (U.S. Patent No. 6,643,706) in view of Henry et al. (U.S. Patent No. 6,681,392).

Claim 1 has been amended to recite:

A computer system, comprising:

a plurality of hardware resources;

a plurality of logical resources; wherein the logical resources are created in a logical model and wherein the logical resources represent hardware resources, ***wherein the logical model comprises a hardware model that models all hardware available on the computer system, a software model that models each software process available on the computer system, and a service endpoint model that spans the hardware and software models;***

a plurality of functional processes, ***wherein the logical model is used as input to a code generator to create a view and an application programming interface for each of the functional processes that require configuration data;***

an operating system that includes memory management which supports a protected memory model, wherein a process is assigned a unique or separate protected memory block, where the processes are decoupled from the system through views of the logical model, said views defining a particular set of data to which an associated process has access, wherein views allow multiple different processes to use the same logical model to be started, upgraded, or restarted independently of other processes;

a configuration process for configuring certain of the plurality of functional processes on particular ones of the logical resources; and

a mapping process for creating a map associating the plurality of hardware resources with the plurality of logical resources;

***wherein the logical model is layered on the hardware resources, adding a layer of abstraction between the hardware resources and the functional processes;***

***wherein the functional processes are decoupled from the logical model and the hardware resources with a second layer of abstraction;***

***wherein the logical model and the hardware resources are changed, evolved, and grown to support new functional processes without having to change existing functional processes;*** and

wherein software applications may be upgraded and downgraded independent of each other and without having to reboot the computer system.

Similarly, Claim 13 has been amended to recite:

A method of operating a computer system, comprising:

- providing a modular software architecture, wherein said software architecture comprises a module that resides in a protected memory space, wherein the module has a logical name that can be resolved into a location and a process, wherein during a switchover to a backup module for an upgrade or a failure, the backup module assumes the resolvable logical name, such that computing processes continue unaffected by the switchover;

- providing an operating system that includes memory management which supports a protected memory model, wherein a process is assigned a unique or separate protected memory block, such that processes, where said processes are decoupled such that they are decoupled from the system through views of a logical model, said views defining a particular set of data to which an associated process has access, wherein views allow multiple different processes to use the same logical model to be started, upgraded, or restarted independently of other processes;

- wherein the logical model comprises a hardware model that models all hardware available on the computer system, a software model that models each software process available on the computer system, and a service endpoint model that spans the hardware and software models;*

- wherein the logical model is used as input to a code generator to create a view and an application programming interface for each of the processes that require configuration data;*

- creating logical resources having characteristics similar to particular hardware resources;

- generating a map of logical resources to hardware resources; and

- provisioning services to logical resources;

- wherein the logical model is layered on the hardware available on the computer system, adding a layer of abstraction between the hardware available on the computer system and the functional processes;*

- wherein the processes are decoupled from the logical model and the hardware available on the computer system with a second layer of abstraction;*

- wherein the logical model and the hardware available on the computer system are changed, evolved, and grown to support new processes without having to change existing processes; and*

- wherein software applications may be upgraded and downgraded independent of each other and without having to reboot the computer system.

Similarly, Claim 21 has been amended to recite:

The method of operating a computer system, comprising:

- providing a modular software architecture, wherein said software

architecture comprises a module that resides in a protected memory space, wherein the module has a logical name that can be resolved into a location and a process, wherein during a switchover to a backup module for an upgrade or a failure, the backup module assumes the resolvable logical name, such that computing processes continue unaffected by the switchover;

providing an operating system that includes memory management which supports a protected memory model, wherein a process is assigned a unique or separate protected memory block, where said processes are decoupled such that they are decoupled from the system through views of a logical model, said views defining a particular set of data to which an associated process has access, wherein views allow multiple different processes to use the same logical model to be started, upgraded, or restarted independently of other processes;

***wherein the logical model comprises a hardware model that models all hardware available on the computer system, a software model that models each software process available on the computer system, and a service endpoint model that spans the hardware and software models;***

***wherein the logical model is used as input to a code generator to create a view and an application programming interface for each of the processes that require configuration data;***

providing a logical resource;

providing a physical resource;

configuring the process on the logical resource, said logical resource providing a model of the physical resource; and

applying the configured logical resource to the physical resource;

***wherein the logical model is layered on the hardware available on the computer system, adding a layer of abstraction between the hardware available on the computer system and the functional processes;***

***wherein the processes are decoupled from the logical model and the hardware available on the computer system with a second layer of abstraction;***

***wherein the logical model and the hardware available on the computer system are changed, evolved, and grown to support new processes without having to change existing processes;*** and

wherein software applications may be upgraded and downgraded independent of each other and without having to reboot the computer system.

These amendments are fully supported in the Specification, Drawings, and Claims of the Application and no new matter has been added.

Factor does not teach or suggest: creating logical resources with a Unified Modeling Language (UML); a logical model that includes a hardware model, software model, and a service endpoint model using service endpoint managers and that is used as input to a code generator to create a view and an application programming interface for each of the processes that

require configuration data; or first and second layers of abstraction. Rather, Factor merely teaches a system and method for load balancing. Factor is merely using distributed networking to spread workload and various processes over many devices, or a plurality of web servers, for example.

Applicants, however, disclose a computer system and methods of operating a computer system wherein logical resources are created with the Unified Modeling Language (UML); a logical model that includes a hardware model, software model, and service endpoint model using service endpoint managers and that is used as input to a code generator to create a view and an application programming interface for each of the processes that require configuration data; and a first and second layer of abstraction.

Applicants further disclose a computer system configured with a modular software architecture that includes independent applications that are decoupled from the hardware through the use of a logical model of the computer system. Using the logical model, a view ID and API are generating for each application to define each application's access to particular data in a configuration database. This configuration database is also generated from the logical model. As a result, there is only a limited connection between the computer system's software and hardware, which allows for multiple versions of the same applications to run on the computer system simultaneously and different types of applications to run simultaneously on the computer system.

Applicants still further disclose a computer system wherein the logical model is layered on the hardware resources, adding a layer of abstraction between the hardware resources and the functional processes, wherein the functional processes are decoupled from the logical model and the hardware resources with a second layer of abstraction; and wherein the logical model and the hardware resources are changed, evolved, and grown to support new functional processes without having to change existing functional processes. Although Factor teaches the use of logical and hardware levels of addressing abstraction, Factor does not disclose a computer system wherein the functional processes are decoupled from the logical model and the hardware resources with a second layer of abstraction. Factor teaches only that logical processes are mapped to physical

process using a logical interface. Again, Factor does not teach that the underlying hardware may be accessed wherein software applications may be upgraded and downgraded independent of each other and without having to reboot the computer system

Applicants further disclose the use of views, which allow the logical model and physical system to be changed, evolved, and grown to support new applications and hardware without having to change existing applications. In addition, software applications may be upgraded and downgraded independent of each other and without having to reboot the computer system and without affecting other applications. Factor does not teach such a computer system.

These deficiencies of Factor are not remedied by Marques et al. or Henry et al.

Therefore, Applicants submit that the rejection of Claims 1, 2, 6, and 10-12 under 35 U.S.C. 103(a) as being unpatentable over Factor in view of Marques et al. has now been overcome and respectfully request that this rejection be withdrawn.

**Rejection of Claims 13, 14, 21, 22, 27-29, 31-40, 42, and 50-55 Under 35 U.S.C. 103(a) –  
Factor, Marques et al, Modi et al.:**

Claims 13, 14, 21, 22, 27-29, 31-40, 42, and 50-55 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Factor in view of Marques et al. in view of Modi et al. (U.S. Patent No. 6,667,980).

The above arguments with regard to Claims 13 and 21 apply with equal force here, and these deficiencies are not remedied by Modi et al. Like Factor, and like Marques et al., Modi et al. fail to teach a computer system or methods of using a computer system wherein software applications may be upgraded and downgraded independent of each other and without having to reboot the computer system.

Therefore, Applicants submit that the rejection of Claims 13, 14, 21, 22, 27-29, 31-40,

42, and 50-55 under 35 U.S.C. 103(a) as being unpatentable over Factor in view of Marques et al. in view of Modi et al. has now been overcome and respectfully request that this rejection be withdrawn.

**Rejection of Claims 23-26 and 30 Under 35 U.S.C. 103(a) – Factor and Bruck et al:**

Claims 23-26 and 30 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Factor in view of Bruck et al. (U.S. Patent No. 6,088,330).

The above arguments with regard to Claim 21 apply with equal force here, and these deficiencies are not remedied by Bruck et al. Claims 23-26 and 30 are either directly or indirectly dependent upon Claim 21.

Based on the same unique and novel features of the present invention as described above, namely that Claim 21 has unique and patentable novel features, it is respectfully asserted that these dependent claims are now in condition for allowance.

Therefore, Applicants submit that the rejection of Claims 23-26 and 30 under 35 U.S.C. 103(a) as being unpatentable over Factor in view of Bruck et al. has now been overcome and respectfully request that this rejection be withdrawn.

**Rejection of Claims 3, 4, 8, and 9 Under 35 U.S.C. 103(a) – Factor and Allen et al:**

Claims 3, 4, 8, and 9 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Factor in view of Allen et al. (U.S. Patent No. 5,704,041).

The above arguments with regard to Claim 1 apply with equal force here, and these deficiencies are not remedied by Allen et al. Claims 3, 4, 8, and 9 are either directly or indirectly dependent upon Claim 1.

Based on the same unique and novel features of the present invention as described

above, namely that Claim 1 has unique and patentable novel features, it is respectfully asserted that these dependent claims are now in condition for allowance.

Therefore, Applicants submit that the rejection of Claims 3, 4, 8, and 9 under 35 U.S.C. 103(a) as being unpatentable over Factor in view of Allen et al. has now been overcome and respectfully request that this rejection be withdrawn.

**Rejection of Claims 15, 16, 20, 41, and 43-47 Under 35 U.S.C. 103(a) –**

**Factor and Marques et al, Modi et al., and Allen et al.:**

Claims 15, 16, 20, 41, and 43-47 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Factor in view of Marques in view of Modi in view of Allen et al. (U.S. Patent No. 5,704,041).

The above arguments with regard to Claims 13 and 21 apply with equal force here, and these deficiencies are neither remedied by Modi et al. nor Allen et al. Claims 15, 16, and 20 are either directly or indirectly dependent upon Claim 13. Claims 41 and 43-47 are either directly or indirectly dependent upon Claim 21.

Based on the same unique and novel features of the present invention as described above, namely that Claims 13 and 21 have unique and patentable novel features, it is respectfully asserted that these dependent claims are now in condition for allowance.

Therefore, Applicants submit that the rejection of Claims 15, 16, 20, 41, and 43-47 under 35 U.S.C. 103(a) as being unpatentable over Factor in view of Marques in view of Modi in view of Allen et al. has now been overcome and respectfully request that this rejection be withdrawn.

**Rejection of Claims 48 and 49 Under 35 U.S.C. 103(a) –**

**Factor, Marques et al, and Davis et al.:**



Claims 48 and 49 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Factor in view of Marques et al. in view of Davis et al. (U.S. Patent No. 6,477,566).

The above arguments with regard to Claim 21 apply with equal force here, and these deficiencies are not remedied by Davis et al. Claims 48 and 49 are either directly or indirectly dependent upon Claim 21.

Based on the same unique and novel features of the present invention as described above, namely that Claim 21 has unique and patentable novel features, it is respectfully asserted that these dependent claims are now in condition for allowance.

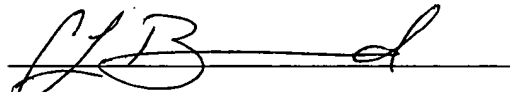
Therefore, Applicants submit that the rejection of Claims 48 and 49 under 35 U.S.C. 103(a) as being unpatentable over Factor in view of Marques et al. in view of Davis et al. has now been overcome and respectfully request that this rejection be withdrawn.

**CONCLUSION**

Applicants would like to thank Examiner for the attention and consideration accorded the present Application. Should Examiner determine that any further action is necessary to place the Application in condition for allowance, Examiner is encouraged to contact undersigned Counsel at the telephone number, facsimile number, address, or email address provided below. It is not believed that any fees for additional claims, extensions of time, or the like are required beyond those that may otherwise be indicated in the documents accompanying this paper. However, if such additional fees are required, Examiner is encouraged to notify undersigned Counsel at Examiner's earliest convenience.

Respectfully submitted,

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